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HELMINTHOLOGY.—*A new roundworm,* Nematodirus rufaevastitatis *(Nematoda: Trichostrongylidae) from domestic sheep,* Ovis aries, *in Wyoming.* Charles G. Durbin, U. S. Bureau of Animal Industry, and Ralph F. Honess, University of Wyoming. (Communicated by E. W. Price.)

The nematodes described in this paper were collected by one of the writers (R. F. H.) from domestic sheep in the area of the Red Desert, Wyo., and western Wyoming during 1948 and 1949. The specimens were forwarded for identification to the Zoological Division, Bureau of Animal Industry. A study of them by the senior writer shows that they belong to the genus *Nematodirus.* They differ, however, from the known species of the genus in certain characters and they are, therefore, described as new.

Nematodirus rufaevastitatis, n. sp.

Description.—Male: 11.5 to 15.3 mm long and about 0.1 mm wide just anterior to the bursa. Esophagus 0.430 to 0.500 mm long and about 0.030 to 0.040 mm wide at its base. Head 0.025 to 0.030 mm wide, as measured with the cuticle slightly inflated (Fig. 1, *A*). Spicules 1.0 to 1.15 mm long and united for about the posterior two-thirds of their total length; the tips have a slight membranous inflation (Fig. 1, *B*). The bursa consists of two large lateral lobes and a dorsal lobe which is indicated only by a slight indentation of the margin of the bursa lateral to the dorsal ray. The length of the bursa from its base to tip is 0.25 to 0.34 mm. Each lateral lobe of bursa is supported by six rays, two ventral, three lateral, and one externodorsal (Fig. 1, *C*, *D*). The two ventral rays arise from a common trunk and are long and slender. The three lateral rays likewise arise from a common trunk and are also long and slender. The mediolateral and postero-

lateral rays are close together. The externolateral branch curves ventrally away from the other two branches. The two dorsal rays arise separately. The externodorsal ray is long and very slender when compared with the other rays of the bursa. The dorsal ray is shorter and thicker than the externodorsal ray; the tip of the dorsal ray is not bifid as in the other described species of the genus.

Female: Unknown.

Host: Ovis aries.

Location: Small intestine.

Distribution: Wyoming, U.S.A.

Specimens: U.S.N.M. Helm. Coll. no. 46922 (type) and 46921 (paratypes).

This species closely resembles *N. spathiger* in the termination of the spicules (Fig. 1, *B*). It differs, so far as the writers are aware, from that species and from all others of the genus *Nematodirus* occurring in ruminants by the size of the bursa and the nonbifid tip of the dorsal ray. These species may be differentiated by the following key.

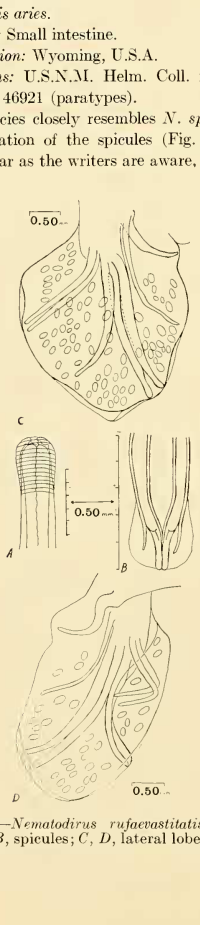

FIG. 1.—*Nematodirus rufaevastitatis*, n. sp.: *A*, Head; *B*, spicules; *C*, *D*, lateral lobes of bursa.

KEY TO MALES OF THE SPECIES OF NEMATODIRUS IN RUMINANTS

1. Terminal portions of dorsal rays undivided ..... *N. rufaevastitatis*, n. sp.
   Terminal portions of dorsal rays divided 2
2. Terminal portion of spicules bent ..... *N. tarandi* Hadwen
   Terminal portion of spicules straight 3
3. Small gubernaculum present ..... *N. urichi* Cameron
   Gubernaculum absent 4
4. Mediolateral and posterolateral rays well separated ..... *N. roscidus* Railliet
   Mediolateral and posterolateral rays close together 5
5. Spicules differing in length, terminal portion twisted ..... *N. abnormalis* May
   Spicules equal in length, terminal portion straight 6
6. Cuticular expansion of terminal portion of spicules spatulate ..... *N. spathiger* (Railliet)
   Cuticular expansion of terminal portion of spicules sharply pointed 7
7. Cuticular expansion of terminal portion of spicules 0.1 mm long ..... *N. helvetianus* May
   Cuticular expansion of terminal portion of spicules 0.06 to 0.08 mm in length 8
8. Terminal portion of each spicule divided into two rodlike structures united at the tips ..... *N. oiratianus* Rajewskaja
   Terminal portion of each spicule not divided ..... *N. filicollis* (Rudolphi)

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